

groups, waist-hip ratio, creatinine levels were significantly high; glomerular filtration rate (GFR) was low in IGT or DM group compared to the other one whose OGTT test was normal. In these parameters, GFR predicted IGT or DM with %72 sensitivity and %55 specificity. Before the test, patients with FPG <100 mg/dl, %30 of patients had insulin resistance.

Conclusion: In significant part of patients with CAD, IGT or DM was present despite normal FPG. Conventional risk factors, severity or duration of CAD cannot predict IGT or DM. OGTT testing for IGT or DM, independent from FPG, would contribute to the diagnosis.

Parametre	Normal (n=65)		BGT + DM (n=40)		P değeri
	Orta-SS	%	Orta-SS	%	
Tutulan Kor. Ar. Say.					
Tek damar	31		25		p>0,05
İki damar	35		28		p>0,05
Üç damar	29		27		p>0,05
Bilinmiyor	5		20		
Revas. Ed. Kor. Ar. Say.					
Yok	3		15		p>0,05
Tek damar	58		55		p>0,05
İki damar	25		15		p>0,05
Üç damar	11		5		p>0,05
Bilinmiyor	3		10		
CABG varlığı					
Yok	85		78		p>0,05
Var	13		22		p>0,05
Serebrovasküler ve periferik arter hast.	8		19		p>0,05
Ailede kor. Hast.	55		50		p>0,05
Ailede mk. Kor. Hast.	21		21		p>0,05
Ailede DM varlığı	19		31		p>0,05
İlaç kullanımı (sy,%)					
ACE inhibitörü	31=48	54	54=61	72	p>0,05
ARB	14=33	23	11=28	16	p>0,05
Beta bloker	38=47	81	49=55	75	p>0,05
Kalsiyum k. b.	11=28	17	11=27	22	p>0,05
Statın	40=45	90	50=57	75	p>0,05

Tablo -2: Normal ve BGT + DM gruplarının özellikleri

	Normal (n=65)		BGT + DM (n=40)		P değeri
	%	Orta-SS	%	Orta-SS	
Yaş		57=10		61=9	p=0,095
Cinsiyet					
Erkek	88		88		
Kadın	12		12		
Bel çevresi (cm)		99=8		102=6	p=0,107
Bel Kalça oranı		0,96±0,04		0,98±0,04	p=0,019
Kilo (kg)		82=13		84=12	p=0,477
Vücut kitle indeksi		28,8=3,9		29,7=3,7	p=0,226
BUN (mg/dl)		16=5		16=4	p=0,167
Kreatinin (mg/dl)		0,9±0,16		1,0±0,17	p=0,003
Cockcroft GFR (cc/dk)		97=27		86=21	p=0,03
MDRD GFR (cc/dk)		88=19		74=13	p=0,002
EF%		48=9		44=14	p=0,184
IKH süresi (ay)		56=55		68=63	p=0,319
HT varlığı	72		87		p=0,068
HT süresi		47=55		70=73	p=0,110
HL varlığı	91		85		p=0,367
HL süresi		45=49		66=75	p=0,479
Sigara kullanımı					
Aktif		27		11	p>0,05
Bırakmış		53		63	p>0,05
Kullanmayan		20		26	p>0,05
Sigara kul. süresi		27=22		27=26	p>0,05
NYHA sınıfı					
NYHA I	94		85		p>0,05
NYHA II	9		15		p>0,05
NYHA III	0		0		p>0,05
NYHA IV	0		0		p>0,05
CCS sınıfı					
Anjina yok	80		82		p>0,05
CCS I	5		0		p>0,05
CCS II	15		15		p>0,05
CCS III	0		3		p>0,05
CCS IV	0		0		p>0,05
Mf varlığı					
Yok	14		15		p>0,05
Subendokardiyal	12		5		p>0,05
Anterior duvar	26		35		p>0,05

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Serum Vitamin D and CRP Levels are Independently Associated with Diastolic Dysfunction

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Aim: Vitamin D deficiency is common and may contribute to cardiovascular diseases. We hypothesized that serum vitamin D (25OHD) levels would be inversely associated with inflammation and with diastolic dysfunction. We therefore investigated the link between serum vitamin D levels (i) echocardiographic measures and (ii) inflammatory parameters.

Materials-Methods: The cross-sectional study included 281 patients who were referred to coronary angiography for stable angina pectoris. Patients were recruited between December 2010 and November 2011. Patients with established congestive heart failure, gout, chronic kidney disease (estimated glomerular filtration rate <60 ml/min/1.73 m²), acute infection were not included. We measured serum 25OHD levels, C-reactive protein (CRP) and fibrinogen levels. A radioimmunoassay procedure was used to measure 25OHD (DiaSorin, Stillwater, MN). We also performed standardized left ventricular (LV) echocardiograms and echocardiographic data were used for classification of systolic and diastolic dysfunction. We analyzed the relation between serum levels of 25OHD and inflammatory markers and echocardiographic measures of left ventricular mass and diastolic dysfunction.

Results: At baseline, subjects had a mean age of 59.5±10 years and 43.4% were women. Left ventricular mass index, left atrial diameter, isovolumic relaxation time, E/E' ratio were significantly higher in patients with lower 25OHD levels. In ordinal logistic regression analysis higher 25OHD was negatively associated only with left ventricular mass index, OR=0.965 (0.939-0.992) p=0.015, isovolumic relaxation time, OR=0.962 (0.939-0.985) p=0.001, E/E' ratio, OR=0.874 (0.811-0.942) p=0.008 and CRP, OR=0.802 (0.668-0.962) p=0.021.

Conclusion: Serum levels of 25OHD are significantly associated with LV diastolic dysfunction and left ventricular mass index although the effect size is rather small. Longitudinal studies in larger populations are needed to establish firmly or refute a causal relationship between vitamin D levels and diastolic dysfunction and left ventricular mass index.

PP-335

The prognostic Significance of Vitronectin in Acute Myocardial Infarction

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Introduction: Vitronectin (VN), a 459 aminoacid long glycoprotein with a mass of 75 kDa, is found in plasma, extracellular matrix and α granules of platelets. Plasma VN levels were found to be elevated in patients with coronary artery disease (CAD), and a positive correlation between VN levels and CAD severity has been demonstrated. VN was also shown to be an independent predictor of adverse cardiovascular outcomes following acute stenting in patients with acute myocardial infarction (AMI) or stable angina.

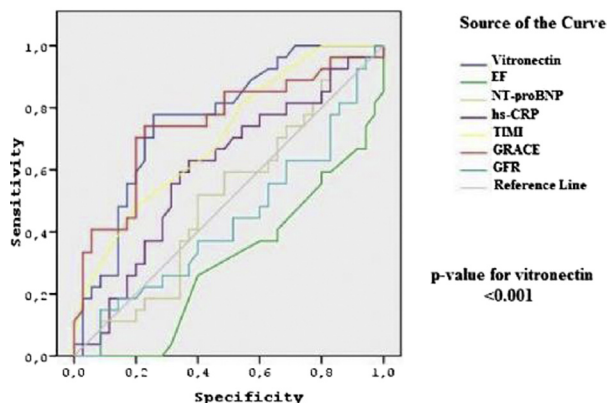
The aim of this study was to assess prognostic significance of serum VN levels at admission in patients with ACS.

Method: Sixty-two patients (40 men, mean age 59.9±10.3 years and 22 women, mean age 68.9±11.2 years), who had been admitted to coronary care unit with first time diagnosis of ACS (ST elevation myocardial infarction [STEMI], non-ST elevation myocardial infarction [NSTEMI]) were consecutively included in the study. The control group consisted of 18 stable patients in whom normal coronary arteries were documented in coronary angiography. Patients were divided into two sub-groups as STEMI and NSTEMI and they were followed up for six months for major adverse cardiovascular events (MACE) consisting of cardiovascular mortality, re-infarction, hospitalization for decompensated heart failure and life threatening arrhythmias. Blood samples were drawn within 6 hours after onset of chest pain and serum VN, high sensitive C-reactive protein (hs-CRP) and N-terminal probrain natriuretic peptide (NT-proBNP) levels were measured using an enzyme immunoassay method. Also, TIMI and GRACE clinical risk scores were calculated on admission for all ACS patients.

Results: The mean VN level in patients with MACE at six months was significantly higher (12.09 µg/ml +/- 20.79 µg/ml vs. 3.74 µg/ml +/- 7.48 µg/ml, p<0.001) compared to the rest of the patient group. Patients in the upper two VN quartiles had significantly higher in-hospital (p=0.026) and six months (p<0.001) MACE rates compared to the patients in the lower two quartiles. Using ROC analysis, a cut-off VN value of 2.16 µg/ml was able to predict MACE at six months with a positive predictive value of 75%, and a negative predictive value of 76%, AUC: 0.76, %95 CI: 0.64-0.88 (p<0.001) (Figure). VN was also able to predict MACE independent of other prognostic markers like age, hs-CRP, pro-BNP, TIMI, GRACE, and LVEF in multivariate regression analysis (p=0.001).

Conclusion: VN levels on admission predict in-hospital and medium-term MACE in patients with ACS independent of conventional risk predictors. VN may have a utility as a prognostic marker in patients with ACS.

ROC Curve



PP-336

The Relationship between Gamma Glutamyl Transferase Levels and the Clinical Outcomes in Patients with ST-Segment Elevation Myocardial Infarction Undergoing Primary PCI

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Objectives: Serum gamma glutamyl transferase (GGT) activity has been shown to be related to the development of atherosclerosis and cardiovascular events. The aim of this study was to evaluate the prognostic value of GGT in patients with ST-segment elevation myocardial infarction (STEMI) undergoing primary percutaneous coronary intervention (PCI).

Methods: A total of 683 consecutive patients with STEMI who underwent primary PCI were evaluated. The study population was divided into tertiles based on admission GGT values. A high GGT (n=221) was defined as a value in the upper third tertile (GGT >37), and a low GGT (n=462) was defined as any value in the lower two tertiles (GGT ≤37). The mean follow-up time was 29 months.

Results: The in-hospital mortality rate was significantly higher in patients in the high GGT group (7.2% vs. 1.7%, p<0.001), as was the rate of adverse outcomes in patients with high GGT levels. In multivariate analyses, a significant association was noted between high GGT levels and adjusted risk of in-hospital cardiovascular mortality (odds ratio=8.6, 95% confidence interval (CI)=2.3–32.4; p=0.001). In a receiver operating characteristic (ROC) curve analysis, a GGT value >37 was identified as an effective cutoff point in STEMI for in-hospital cardiovascular mortality (area under curve=0.71, 95% CI: 0.59–0.82, p<0.001). There were no differences in long-term adverse outcomes rates between the two groups.

Conclusion: GGT is a readily available clinical laboratory value associated with in-hospital adverse outcomes in patients with STEMI who undergo primary PCI. However, there was no association with long-term mortality.

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Does ST/T Wave Change on Resting ECG in Patients with Myocardial Bridging Indicate a Silent Ischemia or a Regional Myocardial Abnormality?

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Aim: A bundle of myocardium that bridges over the epicardial coronary artery is called as Myocardial Bridging (MB). It is supposed to restrict the coronary flow anatomically and functionally when myocardial oxygen demand increased due to strenuous exercise. While ST/T changes on ECG during exercise may represent abnormality of coronary flow and also ischemia upon exertion, ST/T changes on rest ECG may represent silent ischemia due to coronary pathology. However abnormalities of myocardium such as local myocardial thickening, isolated papillary muscle hypertrophy, etc. may cause ST/T changes on resting ECG. We aimed to evaluate and discuss whether it could be associated with variable ST and T wave changes on resting ECG and to discuss its anatomical significance.

Material-Method: We retrospectively evaluated the changes on resting ECG in 36 patients with MB diagnosed with MSCT angiography.

Results: Of the 36 subjects; 16 had ST and T wave changes, 17 had only ST changes. Downsloping and horizontal ST depression was observed in 16 and 17 patients, respectively. 25 had <0.5 mm ST depression and 8 had <1 mm ST depression. Flattening or inversion of T wave was observed in 16 and 16 subjects, respectively. ECG changes were localized on inferior, lateral and inferior-lateral derivations in 15, 3 and 17 patients with MB.

Conclusion: Various types of ECG changes may accompany with the presence of MB in patients with <0.5 mm depression of ST segment and flattening/inversion of T wave are the predominant changes. Downsloping depression of ST segment accompanied with not deeply but minimally inverted T wave inversion may remind the ECG changes which may be observed in local myocardial diseases clinically represented with myocardial wall thickening or myocardial disarray such as e.g. isolated papillary hypertrophy. Thus those ECG changes observed on the resting ECG in patients with MB may represent not only a silent ischemia but also a histological or regional abnormality of myocardium consisting bridging segment. Further studies in order to evaluate that regional abnormality of myocardial tissue by means of cardiac magnetic resonance imaging may be designed in the future.

